

ABSTRACT

This invention relates to a local oscillator using a correction circuit for correcting I/Q mismatch through LO path and a receiver using the same. The local oscillator provides in-phase local oscillating signal and quadrature-phase signal to first and second mixers outputting input signal with mixing in-phase local oscillating signal and quadrature-phase local oscillating signal, respectively. The oscillator comprises a local oscillator having first and second delay cells and outputting said in-phase local oscillating signal and said quadrature-phase local oscillating signal; and a correction circuit for controlling phase matching characteristic between said in-phase local oscillating signal and said quadrature-phase local oscillating signal outputted from said local oscillator, said correction circuit setting bias current flowing in said first and second delay cells of said local oscillator as being different. In another embodiments, the phase matching characteristic is controlled by setting bias voltage applied to the first and second delay cells as being different, by setting width of active device included in the first and second delay cells as being different, or by setting impedance of passive device as being different.